

REMARKS

The Applicant thanks the Examiner for the thoughtful comments in the Final Action of March 14, 2003. Submitted herewith are amendments, and an accompanying request for continued examination (RCE), and a signed Declaration of Inventor, Kirkland W. Vogt.

The Office Action rejects the pending claims. Claims 9-14, and 16 were objected to as indefinite. In response, as suggested by the Examiner, these claims have been clarified to specify exactly what article or product is the subject of each claim. The amended description now is very specific, and meets all requirements of section 112 in this regard.

All pending claims were also rejected under section 103(a) as unpatentable over Vogt (U.S. Patent No. 6,040,393)(the "Vogt" patent) in light of Spek (U.S. Patent No. 4,886,702)(the "Spek" patent). The Office Action indicates that Vogt discloses a polyurethane in this context, but does not teach using an acrylic latex. However, even in light of this deficiency, the Office Action suggests that Spek "recognizes the equivalency" of the two.

The Office Action states that one of ordinary skill in the art would have been motivated to make the combination by substituting an acrylic latex as in Spek into the teachings of Vogt, since Spek teaches that both are usable for this purpose. The Office Action indicates that in this art, both polyurethane and acrylic latex polymers were

known to be heat coagulatable polymers which could be used to make elastomeric coatings.

The section 112 and 103 rejections are hereby traversed, and remarks are presented below.

The References Contain
No Express Motivation to Combine

First, it should be noted that there is no stated or express motivation in Vogt or Spek that would counsel for substituting or combining an acrylic for the polyurethane of Spek, to reconstruct a case for obviousness. Absent such an express motivation in the reference, there can be no obviousness.

The Invention is Not Obvious

The facts indicate that the invention is not obvious. In the amended claims, it is recognized that a new textile-elastomer composite has been made and discovered. That is, the formulation of the invention includes a recognition that to form such a textile-elastomer composite, one must provide a textile fabric that has been coated with an elastomer composition of particular features. The elastomer composition, as defined by the claims, uses a waterborne, anionically-stabilized acrylic latex.

This is not just *any* acrylic latex. The acrylic latex is specifically limited to those which are capable of and which will indeed in this particular application become *destablized under acidic conditions, in which the acrylic latex is adapted for assuming a*

non-emulsified state upon contact with the acid. Early attempts to find such an acrylic failed, and this fact supports nonobviousness of the invention.

Obviousness is a *Real World Story* --
Not an Abstract Concept

The Federal Circuit insists that what it terms the "real world story" of the invention not be obscured by lawyer's games played with the patent and the prior art. That human, real world story forms a major part of the landscape of the case, and often reflects the inadequacy of the prior art and compels a conclusion of nonobviousness. *Northern Telecom v. Datapoint*, 908 F.2d 931 (Fed. Cir. 1990).

In this instance, the real world story is provided in part by the Declaration submitted herewith, in which the inventor tried such a substitution, failed, worked and invented, tried some more, and eventually prevailed by finding certain particular acrylics that presented the correct properties in the presence of acid.

Early Attempts to Solve the
Problem Failed

Early attempts to solve the problem *failed*. This is a major factor in secondary considerations for nonobviousness.

In April/May 1998, the inventor, Kirk Vogt, was working on the problem of how to formulate an elastomer composite that could be successfully and commercially used in forming a material that could be employed as a simulated leather, or a "leather-like" synthetic material. See Declaration of Vogt, paragraph 6. He was attempting to find a

lower cost solution to the formation of such a product. For such a product to be commercially valuable, it was important that it be capable of manufacture using starting materials which had a lower base cost. Declaration, para. 7.

Later, on about April 16, 1998 (see attached lab notebook page 10547-36, attached to Declaration), Vogt attempted to make a fabric/elastomer composite using acrylic, instead of polyurethane. Thus, an acrylic material was substituted for the polyurethane which already had been found to work well. Acrylics of this type were known to cost less than polyurethanes. Declaration, para. 9.

Vogt chose two commercially available acrylics and ordered them for his use in experiments to find an acceptable lower cost solution. The acrylics were BF Goodrich Vycar 460X104 PVC Emulsion, and Rhoplex TR407 Acrylic.

Vogt's attempt to use the above mentioned acrylics failed. That is, numerous samples were run in his laboratory (see page 10547-36), but the solution failed to coagulate. See Declaration, paragraph 11. When Vogt tried to coagulate (1) Rhoplex acrylic, and (2) Vycar acrylic, both of these acrylics failed to coagulate upon contact with acetic acid. Thus, Vogt's attempt to simply *substitute* an acrylic for a polyurethane *did not work*.

Later, Vogt continued to work on a solution to the problem. He began to work on the issue of how to make an acrylic work in such a chemical system. He persisted by investigating acrylic chemistry, and reviewed the problem, looking for a solution to this problem. It required a significant amount of thought and chemical experience to find a

solution. Declaration, para. 12. This was his "*real world*" problem. At first, he was skeptical that an acrylic could be found that would work in this application. Declaration, para. 13.

Vogt slowly began to realize that the above mentioned acrylics did not coagulate properly in forming an anionically stabilized acrylic latex which was destabilized under acidic conditions. He realized that upon contact with acid, some acrylics would not become destabilized, but instead would undesirably remain in an emulsified state, and therefore would not achieve a textile elastomer composite product. Declaration, para. 13.

Vogt began a search for an acrylic material that could achieve a destabilized state upon contact with an acidic material, which could achieve a textile elastomer product. He made telephone inquiries with acrylic suppliers, and inquired regarding the formulations that were available in the marketplace at that time. Declaration, para. 14. He persisted, even in the face of his own failures.

Vogt Unexpectedly and
Surprisingly Found a Workable Solution

Vogt later unexpectedly and surprisingly found an inventive solution. Vogt conducted another experiment, using a different acrylic. Declaration, para. 15. The acrylic used this time was a Parachem AC-790 Acrylic, made by the Parachem Chemical Company of Simpsonville, South Carolina. Vogt chose this acrylic after thinking about the problem, and making inquiries regarding the exact chemical nature

and exact chemical formulation of this particular acrylic. Of the hundreds of acrylics on the market, he chose this particular acrylic because of its behavior in the presence of acid. Declaration, para. 15. Unexpectedly, Vogt found that this acrylic did coagulate properly. See lab notebook page 10547-41; Declaration para. 16.

Vogt finally was able to locate a waterborne, anionically-stabilized acrylic latex which would in fact desirably become de-stablized under acidic conditions. This acrylic latex unexpectedly was found to be capable of being adapted for assuming a non-emulsified state upon contact with acid, resulting in a textile elastomer composite made with an acrylic. Declaration, para. 17.

The Combination of Vogt/Spek Does Not
Render Obvious the Invention

The combination of the earlier Vogt patent and Spek do not even provide a *prima facie* case of obviousness. This is true because neither cited reference reveals a textile elastomer composite of a fabric coated with a waterborne, anionically-stabilized acrylic latex, *in which the acrylic latex is de-stablized under acidic conditions, whereby the acrylic latex is adapted for assuming a non-emulsified state upon contact with acid*, within such an elastomer composite. Thus, the elements of the invention as claimed are not found in any of the cited references.

Spek is directed to impregnating a textile cloth using a blowing agent. This process produces a relatively stiff product, which is not in any manner equivalent to the invention. A freon blowing agent is employed in Spek. The coagulation process of

Spek requires acid or salt compounds, which have the tendency to undesirably coagulate the latex prior to contact with the textile substrate, resulting in a non-uniform dispersion on the substrate surface.

Spek mentions at column 5, lines 10-16 a list of polymer latexes, including polyacrylate latex. However, the teaching of Spek also stresses that polyurethane is preferred, because of the "specific polymer characteristics" of the polyurethane polymer. See column 5, lines 18-20. Spek gives a long list of latexes of various types, at column 5, lines 9-16. No express teaching of exactly which acrylics could be used, or how they would behave in acidic conditions is disclosed. Spek does not concern itself with emulsification of acrylics. Spek does not contemplate the invention, or any modification which when combined with the Vogt patent could result in the invention.

There is no express motivation in Spek for substitution of an acrylic for the polyurethane of the previously mentioned Vogt patent.

Furthermore, claims 28 and 29 are patentable as providing a weight ratio which is not disclosed or rendered obvious by any cited reference, including Spek.

Conclusion

The invention is not obvious. The "real world" facts in this case clearly support patentability. Early attempts to solve the problem failed. A simple substitution of acrylic for polyurethane failed. The inventor finally solved the problem, but only after expending persistent and sustained efforts.

Spek does not teach, or in combination render obvious, the invention of this application. Spek does not reveal or specify a textile elastomer composite in which a waterborne, anionically-stabilized acrylic latex is employed, in which the acrylic latex is capable of being destabilized under acidic conditions, or in which the acrylic latex is adapted for assuming a non-emulsified state upon contact with acid. The reference cannot be cited for what it does not teach.

It is believed that the above claims patentably define over the prior art record and that the application is in complete condition for allowance. Should any issues remain after consideration of this Amendment, however, the Examiner is invited and encouraged to telephone the undersigned at her convenience.

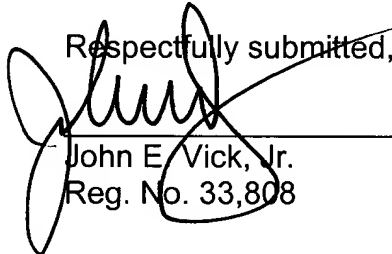
Fee Authorization: In the event that there are additional fees associated with the submission of these papers, Applicant hereby authorizes the Commissioner to withdraw those fees from our Deposit Account No. 04-0500.

USPTO Customer No. 25280
Serial No: 09/818,246

Inventor(s): Vogt
Case No: 5216

Extension of Time: In the event that additional time is required to have the papers submitted herewith for the above referenced application to be considered timely, Applicant hereby petitions for additional time (three months) required to make these papers timely and authorization is hereby granted to withdraw any additional fees necessary for this additional time from our Deposit Account No. 04-0500.

Respectfully submitted,



John E. Vick, Jr.
Reg. No. 33,808

MILLIKEN AND COMPANY
920 Milliken Road, M-495
Spartanburg, SC 29303
Telephone (864) 503-1383